ENGINEERING EVALUATION
SHORE TERMINALS LLC
Application #4684- Plant #7034

3801 Waterfront Road
Martinez, CA 94553

I. BACKGROUND

Shore Terminal has applied for a permit due to loss of exemption for the following equipment:

S-74 Emergency Generator, Cummins Model 210-IF, 157 HP, 1.2 MMBtu/hr.
S-75 Emergency Generator, Cummins Model 280-IF, 145 HP, 1.1 MMBtu/hr.

These engines have been in service since 1974, when they were excluded from District regulation in accordance with Regulation 1-110.2. Because Regulation 1-110.2 was deleted on May 17, 2000, these engines require permit, although these are neither "new" nor "modified" sources as defined in Regulations 2-1-232 and 2-1-234. Therefore, these sources are not subject to New Source Review requirements (BACT, cumulative increase, offsets, toxic review, public notification requirements triggered by proximity to a K-12 school.)

In accordance with District policy, the operation of each engine will be limited to no more than 200 hr/yr for "discretionary use" (maintenance and testing). The operation of these engines to provide power during emergencies will not be limited.

II. EMISSION CALCULATIONS

Daily emissions from S-74, and S-75 engines, assuming 100 hr/yr operation at full load, will be quantified for information only. These engines are not subject to any requirements based on the level of daily or annual emissions.

Emissions from engine (S-74): (based on AP-42 emission factors- Table 3.3-1 for uncontrolled diesel industrial engine)
POC: (0.35 lb/MMbtu)(1.2 MMbtu/hr)(100 hr/yr) = 42 lb/yr
NOx: (4.41 lb/MMbtu)(1.2 MMbtu/hr)(100 hr/yr) = 529 lb/yr
CO: (0.95 lb/MMbtu)(1.2 MMbtu/hr)(100 hr/yr) = 114 lb/yr
PM10: (0.31 lb/MMbtu)(1.2 MMbtu/hr)(100 hr/yr) = 37 lb/yr
SO2: (0.29 lb/MMbtu)(1.2 MMbtu/hr)(100 hr/yr) = 35 lb/yr

Emissions from engine (S-75): (based on AP-42 emission factors- Table 3.3-1 for uncontrolled diesel industrial engine)
POC: (0.35 lb/MMbtu)(1.1 MMbtu/hr)(100 hr/yr) = 39 lb/yr
NOx: (4.41 lb/MMbtu)(1.1 MMbtu/hr)(100 hr/yr) = 485 lb/yr
CO: (0.95 lb/MMbtu)(1.1 MMbtu/hr)(100 hr/yr) = 105 lb/yr
PM10: (0.31 lb/MMbtu)(1.1 MMbtu/hr)(100 hr/yr) = 34 lb/yr
SO2: (0.29 lb/MMbtu)(1.1 MMbtu/hr)(100 hr/yr) = 32 lb/yr

I. PLANT CUMULATIVE INCREASE SINCE 4/5/91

As discussed on page 1 (Background), S-74, and S-75 are not subject to a cumulative increase.

IV. TOXIC SCREENING ANALYSIS

As discussed on page 1 (Background), S-74, and S-75 are not subject to the District Toxic Risk Management Policy.

V. BEST AVAILABLE CONTROL TECHNOLOGY

BACT does not apply for a loss of exemption permit.

VI. OFFSETS

Offsets do not apply for a loss of exemption permit.

VII. STATEMENT OF COMPLIANCE

Sources S-74, and S-75 in this application are subject to Regulation 9, Rule 8 ("NOx and CO from Stationary Internal Combustion Engines"). Like all sources, S-74, and S-75 are subject to Regulation 6 ("Particulate and Visible Emissions"). These engines are not expected to produce visible emissions or fallout in violation of this regulation and they will be assumed to be in compliance with Regulation 6 pending a regular inspection.

This application is considered to be ministerial under the District's proposed CEQA guidelines (Regulation 2-1-311) and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 2.3.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A toxic risk screening analysis is not required.

BACT, PSD, NSPS, and NESHAPS are not triggered.

VIII. CONDITIONS

Permit conditions for S-74, and S-75, Emergency Generators, Application # 4684, Shore Terminals Martinez, Plant # 7034.

1. The engines for emergency generators S-74, and S-75 shall be fired exclusively on diesel fuel having a sulfur content no greater than 0.05% by weight. The sulfur content of the fuel oil shall be certified by the fuel oil vendor. [Basis: Cumulative Increase]

   "Emergency Conditions" is defined as any of the following: [Basis: Regulation 9-8-231]
   a. Loss of regular natural gas supply
   b. Failure of regular electric power supply
   c. Flood mitigation
   d. Sewage overflow mitigation
   e. Fire
   f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor

2. S-74, and S-75 shall only be operated to mitigate emergency conditions or for reliability-related activities. Operation for reliability-related activities shall not exceed 100 hours in any calendar year at each engine. Operation while mitigating emergency conditions is unlimited. [Basis: Regulation 9-8-330, Cumulative Increase]

   "Reliability-related activities" is defined as any of the following: [Basis: Regulation 9-8-232]

a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
b. Operation of an emergency standby engine during maintenance of a primary motor

3. S-74, and S-75 shall be equipped with either: [Basis: Regulation 9-8-530]
   a. a non-resettable totalizing meter that measures and records the hours of operation for the engine
   OR
   b. a non-resettable fuel usage meter; the following factors shall be used to convert fuel usage to hours of operation:
   S-74: 8.75 gal/hr
   S-75: 8.0 gal/hr

4. The following monthly records shall be maintained in a District-approved log for at least 5 years for S-74, and S-75 and shall be made available for District inspection upon request: [Basis: Regulations 9-8-530, 1-441]
   a. Total hours of operation for each engine
   b. Hours of operation under emergency conditions for each engine and a description of the nature of each emergency condition
   c. Fuel usage for each engine

IX. RECOMMENDATION

Issue conditional Permit to Operate to Shore Terminal, Martinez for the following equipment:

S-74 Emergency Generator, Cummins Model 210-IF, 157 HP, 1.2 MMBtu/hr.
S-75 Emergency Generator, Cummins Model 280-IF, 145 HP, 1.1 MMBtu/hr.

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Thu H. Bui
Air Quality Engineer II
Permit Services Division
Date: _____

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